

REMARKS

Reconsideration and allowance are requested.

A new set of claims is submitted based largely on the original claim set. New claim 35 combines the features of original-filed claims 1, 5, 6 and 11 and also includes additional language that finds support, for example, in the paragraph that bridges pages 12 and 13 of the original application. Originally-filed claims 3 and 4 have been rewritten in independent claim format as new independent claim 41. Originally-filed claim 12 is now renumbered new claim 42 and incorporates the subject matter of originally-filed dependent claims 16, 17, and 22. New claim 42 also includes additional language similar to that added in new claim 35. New apparatus claim 49 finds the same support as claim 41. Means plus function claims 56 find the same support as claims 35-41, respectively.

All claims stand rejected under 35 U.S.C. §102 for anticipation based on USP 6,259,918 to Labonte. This rejection is respectfully traversed.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Labonte lacks every feature recited in the pending independent claims.

In the technology in this application, mobile stations detect and measure the signal quality of a sector pilot signal or other broadcast signal, e.g., the primary common pilot channel in 3G WCDMA systems. On the other hand, a mobile uses a different pilot signal when an

active connection is established between a mobile and one of multiple narrow antenna beams included in that sector in order to obtain the necessary timing to demodulate the received dedicated traffic channel. Both primary and secondary common pilot channels are found for example in the 3G WCDMA cellular system.

Accordingly, when a radio network controller commands the target base station to issue a new radio link as part of a handover operation, the target base station has no knowledge of which phase reference to use for the new radio link. In other words, because all measurements related to handover are made on the primary pilot, the radio network does not have any information about in which narrow antenna beam the mobile is located when the new radio link is established. As a result, the network cannot tell the mobile which secondary pilot channel to use as phase reference. The link must, therefore, be transmitted on a sector wide covering antenna since the primary pilot is the only known phase reference for the mobile.

This recognition of different phase references (first and second phase references) for the two different types of antenna beams (wide and narrow) is recited in the independent claims. Claims 35, 42, and 50 are directed to a handover approach that avoids the need for establishing a first link using the first phase reference and then reconfiguring that link to a second phase reference corresponding to a desired narrow antenna beam associated with the target base station. The radio network controller receives from the target base station one or more signal quality measurements made by the mobile for a secondary pilot signal transmitted by a corresponding target base station narrow antenna beam. Based on those signal quality measurements of the secondary pilot signals, a desired narrow antenna beam at the target base station is determined. A radio link for a handover connection between the desired narrow antenna beam and the mobile station is established using the second phase reference of the secondary pilot signal

corresponding to the desired narrow antenna beam. Claims 41, 49, and 56 are directed to another handover approach where a radio link is first established between the target base station and the mobile station using the first broadcast signal having a first phase reference. Then, a desired narrow antenna beam at the target base station is selected, and the handover radio link is reconfigured to use this selected narrow antenna beam and its corresponding second phase reference.

Labonte's teachings are directed to TDMA systems such as GSM or IS-136. See the references to time slot channels, digital voice color codes (DVCCs), etc., e.g., at col. 5, lines 38-47. The power compensation problem Labonte focuses on is not an issue in typical CDMA systems that are carefully power-controlled. In CDMA, the power on all communication channels is constantly changed to compensate for fading, interference from other users, etc. in order to keep the received signal quality at a constant level.

The independent claims 35, 42, and 50 recite that the mobile station provides one or more downlink signal quality measurements on a broadcast or first pilot signal associated with a wide antenna beam and on a secondary pilot signal associated with a narrow antenna beam. In contrast, Labonte primarily has the mobile measures signal strength of traffic channels. See e.g., col. 5, lines 20-23; col. 7, lines 5-15. Pilot signals channels are not traffic channels. Accordingly, Labonte also does not teach "determining a desired narrow antenna beam from the multiple narrow antenna beams at the target base station for communicating with the mobile station based on the one or more signal quality measurements of the second pilot signals." (Quoted from claim 24).

Nor does Labonte disclose "establishing a radio link for a handover connection between the desired narrow antenna beam at the target base station and the mobile station using the

second phase reference of the second pilot signal corresponding to the desired narrow antenna beam.” (Quoted from claim 24 but with similar language in independent claims 30 and 39). The Examiner makes reference to col. 49-58 with respect to first and second phase references on page 3 of the office action, but no such columns exist. There is no description of establishing a handover link with a narrow antenna beam of the target base station using second phase reference of the second pilot signal corresponding to the desired narrow antenna beam.

Claims 41, 49, and 56 also recite that the mobile station provides one or more downlink signal quality measurements on a broadcast or first pilot signal associated with a wide antenna beam and on a secondary pilot signal associated with a narrow antenna beam. As explained above, Labonte primarily has the mobile measures signal strength of traffic channels. Nor does Labonte describe the first and second phase references found in these claims. In addition, Labonte lacks a teaching of establishing a handover connection by first establishing a link to the target base station using “the first broadcast signal and the first phase reference,” and then, after appropriate measurements have been made in the base station a narrow antenna beam selected, reconfiguring the link to use that narrow beam and its corresponding phase reference. In Labonte, all necessary information is sent to the MSC so that a narrow beam can be configured directly. See col 8, lines 30-35.


Regarding dependent claims 39, 46, and 54, Labonte does not disclose softer handover.

The application is in condition for allowance. An early notice to that effect is respectfully requested.

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Respectfully submitted,

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